

Appendix 2a, b



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Appendix 2a. Crosswalk of Rhode Island Habitats

This appendix provides a crosswalk linkage between the RI WAP key habitats and the Northeast Terrestrial Habitat Classification System (NETHCS) (Gawler 2008), Northeast Aquatic Habitat Classification System (Olivero and Anderson 2011), CMECS (www.csc.noaa.gov/cmecs) and Ecological Community Classification (RIECC) of Rhode Island (Enser et al. 2011). Chapter 2 and the habitat profiles describe the extent and condition of the habitats determined through existing GIS coverages and analyses for Rhode Island such as those of the RIGIS, TNC, and other partners where information was available. This crosswalk directly addresses Element 2, AFWA Best Practices guidance and the NE Lexicon.

Key Habitat Type	Sub-Type	NETWHC Macrogroup	NETWHC System	CMECS: Aquatic Setting	CMECS: Water Column Component	CMECS: Geoform Component	CMECS: Substrate Component	CMECS: Biotic Component
Maritime Beach Strand		Coastal Grassland and Shrubland	North Atlantic Coastal Plain Sandy Beach					
Maritime Herbaceous Dune		Coastal Grassland and Shrubland	North Atlantic Coastal Plain Dune					
Maritime Grassland		Coastal Grassland and Shrubland	North Atlantic Coastal Plain Heathland & Grassland					
Maritime Shrub Dune		Coastal Grassland and Shrubland	North Atlantic Coastal Plain Dune					
Maritime Shrubland		Coastal Grassland and Shrubland	North Atlantic Coastal Plain Heathland & Grassland					
Old Field		Ruderal Grassland and Shrubland	Ruderal Upland – Old Field					

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Clearcut		Ruderal Grassland and Shrubland	Ruderal Upland – Old Field					
Hedgerow		Ruderal Grassland and Shrubland	Ruderal Upland – Old Field					
Utility Rights-of-Way		Ruderal Grassland and Shrubland	Powerline Right-of-Way					
Inland Rocky Outcrop		Cliff and Talus	Acidic Cliff and Talus					
Maritime Rocky Cliff		Rocky Coast	Acadian-North Atlantic Rocky Coast					
Maritime Bluff		Cliff and Talus	Northeastern Erosional Bluff					
Inland Sand Barren		(Central Oak-Pine)	Northern Atlantic Coastal Plain Pitch Pine Barrens (in part)					
Maritime Woodland		Central Oak-Pine	North Atlantic Coastal Plain Maritime Forest					
Oak Forest	Black Oak-Scarlet Oak/Heath Forest	Central Oak-Pine	Northeastern Interior Dry-Mesic Oak Forest					
Oak Forest	White Oak/Mountain Laurel Forest	Central Oak-Pine	Northeastern Interior Dry-Mesic Oak Forest					
Oak Forest	Chestnut Oak Forest	Central Oak-Pine	Central Appalachian Dry Oak-Pine Forest					

APPENDIX 2a: CROSSWALK OF RHODE ISLAND HABITATS

Oak Forest	Mixed Oak – American Holly Forest	Central Oak-Pine	North Atlantic Coastal Plain Hardwood Forest					
Oak Forest	Mixed Oak/Hickory Forest	Central Oak-Pine	Northeastern Interior Dry-Mesic Oak Forest					
Northern Hardwood Forest	Beech/Sugar Maple/Red Oak Forest	Northern Hardwood and Conifer	Appalachian-Northern Hardwood Forest					
Northern Hardwood Forest	Mixed Hardwood Riverside Forest	Northern Hardwood and Conifer	Appalachian-Northern Hardwood Forest					
Pitch Pine Woodland/Barrens		Central Oak-Pine	North Atlantic Coastal Plain Pitch Pine Barrens					
Hemlock/Hardwood Forest		Northern Hardwood and Conifer	Laurentian-Acadian Pine-Hemlock-Hardwood Forest					
Mixed Oak/Pitch Pine Forest		Central Oak-Pine	Central Appalachian Dry Oak-Pine Forest					
Mixed Oak/White Pine Forest		Northern Hardwood and Conifer	Northeastern Coastal and Interior Pine-Oak Forest					
Tree Plantation		Plantation and Ruderal Forest	Managed Tree Plantation					
Ruderal Forest		Plantation and Ruderal Forest	Northern & Central Hardwood and Conifer Ruderal Forest					
Vegetables		Agricultural	Cultivated Crops					

APPENDIX 2a: CROSSWALK OF RHODE ISLAND HABITATS

Turf		Agricultural	Cultivated Crops					
Nursery		Agricultural	Cultivated Crops					
Orchard		Agricultural	Cultivated Crops					
Vineyard		Agricultural	Cultivated Crops					
Christmas trees		Agricultural	Cultivated Crops					
Hayfields		Agricultural	Pasture/Hay					
Pasture		Agricultural	Pasture/Hay					
Cemetery		Maintained Grasses and Mixed Cover	Urban/Recreation al Grasses					
Lawn; Park; Golf Course; Airfield/Runway Margin; Highway Median		Maintained Grasses and Mixed Cover	Urban/Recreation al Grasses					
Sand/Gravel Pit; Rock Quarry	Active pits/quarries	Extractive	Quarries/Pits/Strip mines					
Sand/Gravel Pit; Rock Quarry	Inactive Pits/quarries	Extractive	Quarries/Pits/Strip mines					

APPENDIX 2a: CROSSWALK OF RHODE ISLAND HABITATS

Commercial/Industrial		Urban/Suburban Built	Commercial/Industrial					
High Intensity Residential		Urban/Suburban Built	High Intensity Residential					
Medium Intensity Residential		Urban/Suburban Built	Medium Intensity Residential					
Low Intensity Residential		Urban/Suburban Built	Low Intensity Residential					
Rural/Sparse Residential		Urban/Suburban Built	Rural/Sparse Residential					
Coastal Plain Pond/Pondshore	Seasonally Flooded Coastal Plain Pondshore	Coastal Plain Pond	North-Atlantic Coastal Plain Pond					
Coastal Plain Pond/Pondshore	Semipermanently Flooded Coastal Plain Pondshore	Coastal Plain Pond	North Atlantic Coastal Plain Pond					
Inland Pond and River Shore		Lake and River Shore	Laurentian-Acadian Lakeshore Beach					
Emergent Marsh	Semi-permanently Flooded (Deep) Marsh	Emergent Marsh	Laurentian-Acadian Freshwater Marsh					
Emergent Marsh	Seasonally Flooded (Shallow) Marsh	Emergent Marsh	Laurentian-Acadian Freshwater Marsh					

APPENDIX 2a: CROSSWALK OF RHODE ISLAND HABITATS

Freshwater Tidal Marsh		Tidal Marsh	Laurentian-Acadian Freshwater Marsh					
Wet Meadow		Wet Meadow/Shrub Swamp	Laurentian-Acadian Wet Meadow-Shrub Swamp					
Shrub Swamp		Wet Meadow/Shrub Swamp	Laurentian-Acadian Wet Meadow-Shrub Swamp					
Impoundment		Modified/Managed Marsh	Modified/Managed Marsh					
Ruderal Marsh		Modified/Managed Marsh	Modified/Managed Marsh					
Red Maple/Pin Oak Floodplain Forest		Coastal Plain Swamp	North Atlantic Coastal Plain Basin Swamp and Wet Hardwood Forest					
Silver Maple/Sycamore Floodplain Forest		Large River Floodplain	North-Central Appalachian Large River Floodplain					
Red Maple Swamp	Red Maple – Deciduous Shrub	Northern Swamp	North-Central Appalachian Acidic Swamp					
Red Maple Swamp	Red Maple – Great Rhododendron	Northern Swamp	North-Central Appalachian Acidic Swamp					
Red Maple/Black Ash Swamp		Northern Swamp	North-Central and Interior Appalachian Rich Swamp					
Swamp White Oak Swamp		Northern Swamp	North-Central Appalachian Acidic Swamp					

APPENDIX 2a: CROSSWALK OF RHODE ISLAND HABITATS

Hemlock/Hardwood Swamp		Northern Swamp	North-Central Appalachian Acidic Swamp					
			N/A					
Dwarf Shrub Fen/Bog		Northern Peatland	North-Central Interior & Appalachian Acidic Peatland					
Black Spruce Bog		Northern Peatland	North-Central Interior & Appalachian Acidic Peatland					
Graminoid Fen		Coastal Plain Peatland	Atlantic Coastal Plain Northern Bog					
Sea Level Fen		Coastal Plain Peatland	Atlantic Coastal Plain Northern Bog					
Coastal Plain Quagmire		Coastal Plain Peatland	Atlantic Coastal Plain Northern Bog					
Atlantic White Cedar Swamp	White Cedar-Hardwood Swamp	Coastal Plain Swamp	North Atlantic Coastal Plain Basin Peat Swamp					
Atlantic White Cedar Swamp	White Cedar-Rhododendron Swamp	Coastal Plain Swamp	North Atlantic Coastal Plain Basin Peat Swamp					
Mud Flat		Intertidal Shore	North Atlantic Intertidal Mud Flat	Marine or Estuarine Intertidal		Geologic: Tidal Flat	Mud	Attached Biota - Emergent Wetland - Vegetated Tidal Mudflat

APPENDIX 2a: CROSSWALK OF RHODE ISLAND HABITATS

Sand Flat		Intertidal Shore	North Atlantic Tidal Sand Flat	Marine or Estuarine Intertidal		Geologic: Tidal Flat	Sand	
Rocky Shore		Intertidal Shore	North Atlantic Rocky Intertidal	Marine or Estuarine Intertidal		Geologic: Boulder Field or Rock Outcrop	Rock	
Salt Marsh	Low Salt Marsh	Tidal Marsh	Northern Atlantic Coastal Plain Tidal Salt Marsh	Marine or Estuarine Intertidal		Geologic: Marsh Platform		Attached Biota - Emergent Wetland - Tidal Marsh - Low Salt Marsh
Salt Marsh	High Salt Marsh	Tidal Marsh	Northern Atlantic Coastal Plain Tidal Salt Marsh	Marine or Estuarine Intertidal		Geologic: Marsh Platform		Attached Biota - Emergent Wetland - Tidal Marsh - High Salt Marsh
Salt Marsh	Salt Panne	Tidal Marsh	Northern Atlantic Coastal Plain Tidal Salt Marsh	Marine or Estuarine Intertidal		Geologic: Marsh Platform		Attached Biota - Emergent Wetland - Vegetated Tidal Flats - Salt Panne
Salt Marsh	Salt Shrub	Tidal Marsh	Northern Atlantic Coastal Plain Tidal Salt Marsh	Marine or Estuarine Intertidal		Geologic: Marsh Platform		Attached Biota - Saltwater Tidal Scrub-Shrub Wetland
Brackish Marsh		Tidal Marsh	Northern Atlantic Coastal Plain Brackish Tidal Marsh	Marine or Estuarine Intertidal		Geologic: Marsh Platform		Attached Biota - Emergent Wetland - Tidal Marsh - Brackish Marsh

APPENDIX 2a: CROSSWALK OF RHODE ISLAND HABITATS

Tidal River/Stream				Estuarine Tidal Riverine Coastal				
Tidal Creek				Estuarine Tidal Riverine Coastal				
Brackish Subtidal Aquatic Bed			N/A	Estuarine Open Water Subtidal				Attached Biota - Aquatic Vegetation Bed - Aquatic Vascular Vegetation
Coastal Salt Pond			N/A					
Warm		Medium River						
Cold		Small River						
Cold		Small River						
Cold		Headwaters and Creeks						
Cold		Headwaters and Creeks						
Cold		Headwaters and Creeks						

APPENDIX 2a: CROSSWALK OF RHODE ISLAND HABITATS

Warm		Headwaters and Creeks						
Cold		Headwaters and Creeks						
		Ponds and Lakes						
		Ponds and Lakes						
Rocky				Estuarine Coastal			Geologic: Rock or Coarse Unconsolidated Mineral	
Soft				Estuarine Coastal			Geologic: Fine Unconsolidated Mineral	
Rocky				Estuarine Open			Geologic: Rock or Coarse Unconsolidated Mineral	
Soft				Estuarine Open			Geologic: Fine Unconsolidated Mineral	
				Estuarine	Upper and Lower Water Column			
				Estuarine Coastal				

APPENDIX 2a: CROSSWALK OF RHODE ISLAND HABITATS

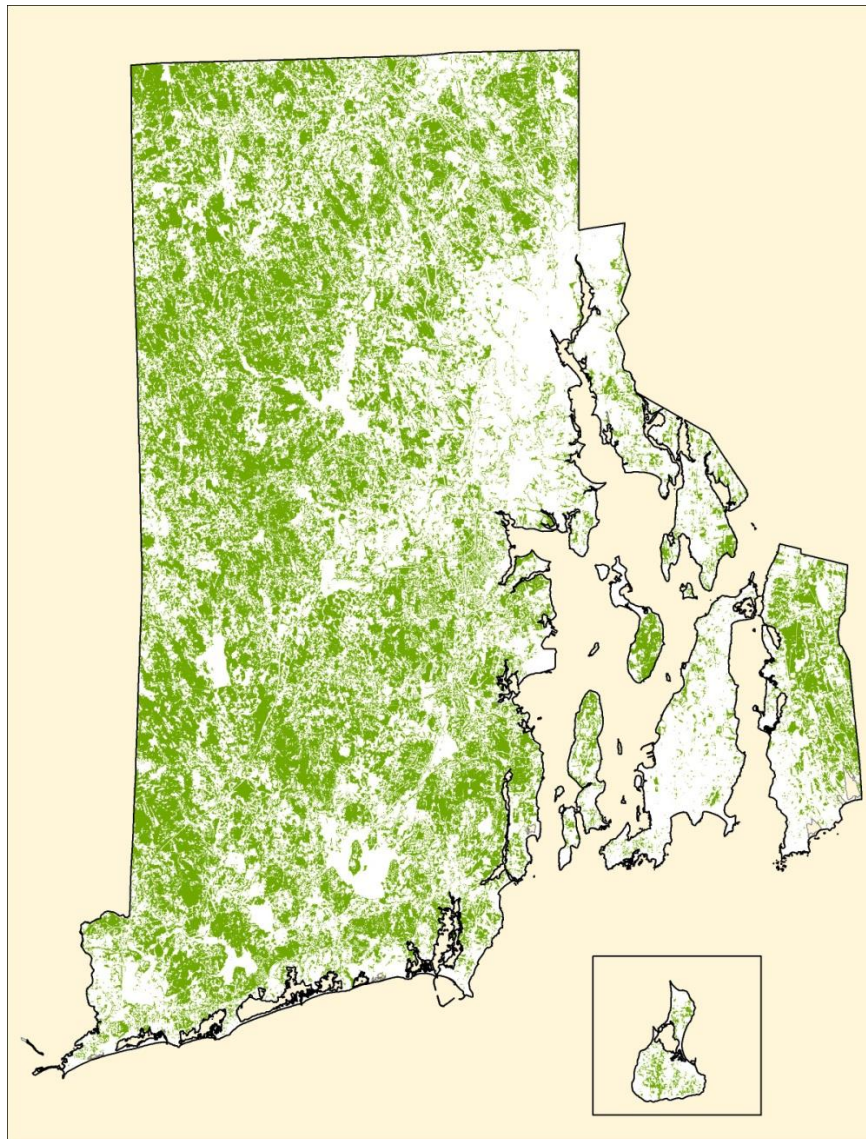
Rocky				Marine Nearshore			Geologic: Rock or Coarse Unconsolidat ed Mineral	
Soft				Marine Nearshore			Geologic: Fine Uncosolidate d Mineral	
Rocky				Marine Offshore			Geologic: Rock or Coarse Unconsolidat ed Mineral	
Soft				Marine Offshore			Geologic: Fine Uncosolidate d Mineral	
				Marine	Upper and Lower Water Column			
				Marine	Upper and Lower Water Column			Planktonic: Zooplankton - Crustacean Holoplankton - Copopod - Calanus Aggregation

Appendix 2b. Maps of Key Habitats and Information on Data Sources and Mapping Methods

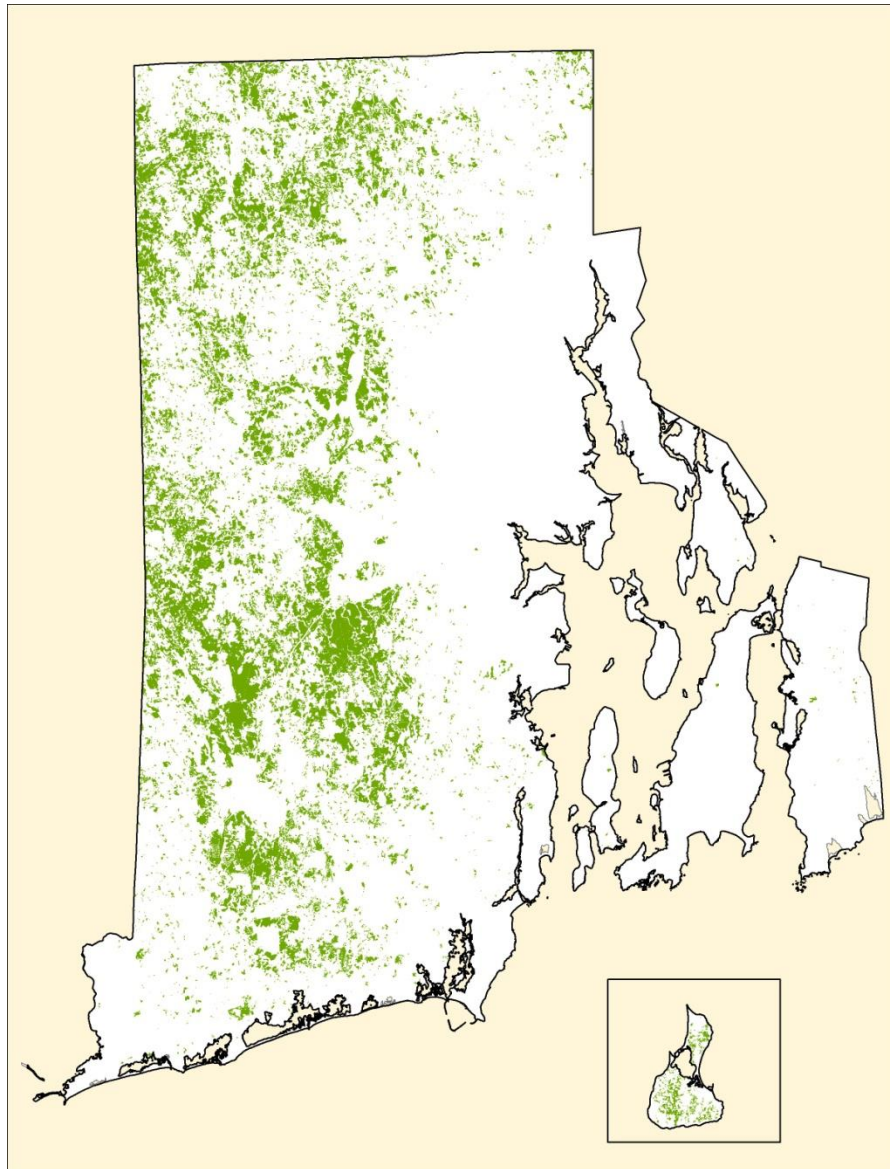
The following maps were produced for this SWAP effort through a collaborative effort of the RI WAP Habitat/GIS Team. This team was assembled to assess the available geospatial data, evaluate the status of key habitats and to map them at the most accurate level possible. The team identified and mapped as many key habitats as possible, and then identified the data necessary to map the remaining habitats. It was determined that insufficient information existed for most of the 84 key habitats to accurately map their distribution and determine their condition. A statewide conservation action and research need in Chapter 4 was developed to address this needed information. These maps resulted from the significant information and knowledge contributed from the team representing major federal, state, and local data sources. They would not have been possible without the extensive GIS efforts of Kevin Ruddock, Paul Jordan and Peter August, as well as the ecological knowledge of Christopher Raithel, Richard Enser, and Julie Lundgren. The team focused their mapping efforts on those key habitats containing the highest number of SGCN.

Please refer to the list of habitat maps that follow this page:

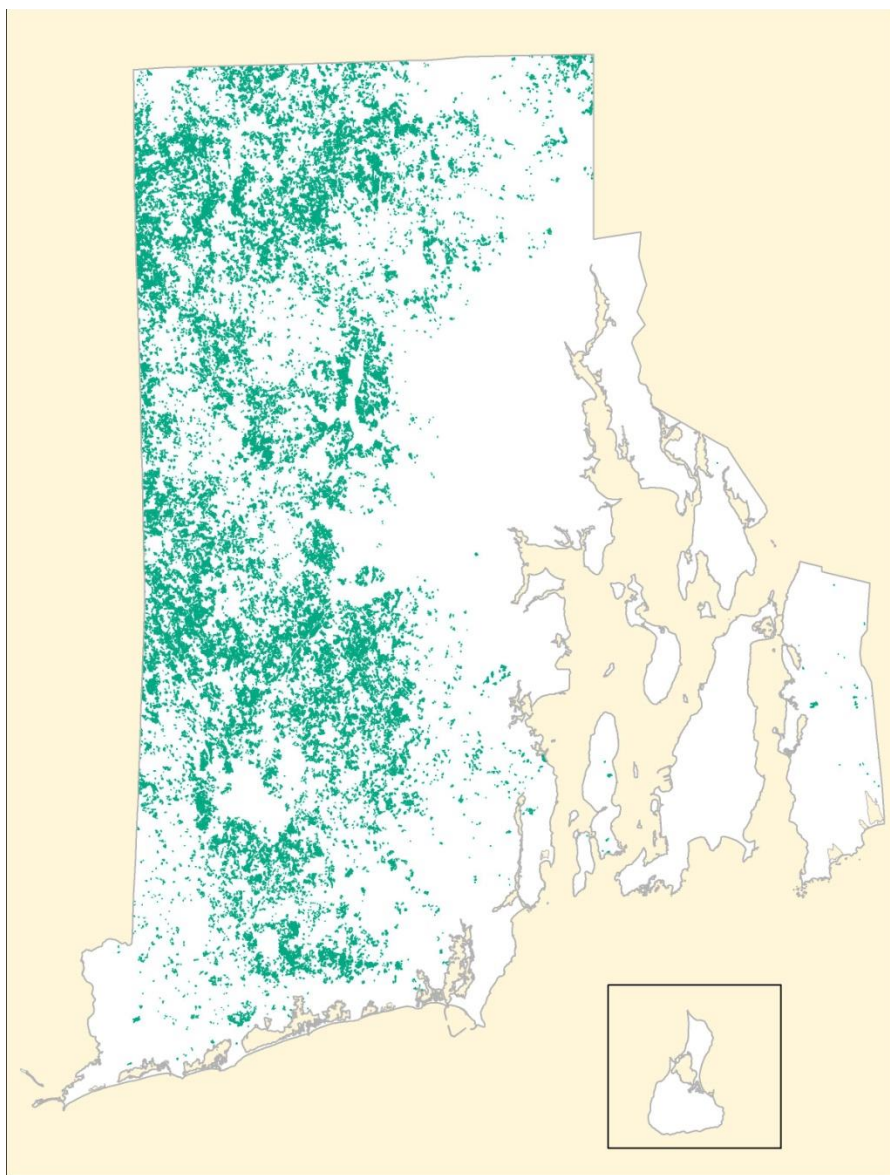
- Deciduous Forests
- Coniferous Forests
- Mixed Coniferous/Deciduous Forests
- Oak Forests
- Ruderal Forests
- Large Forest Blocks
- Tree Plantations
- Maritime Woodlands
- All Forest Types
- Heritage Density
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- Impervious Surfaces
- Land Uses 2011



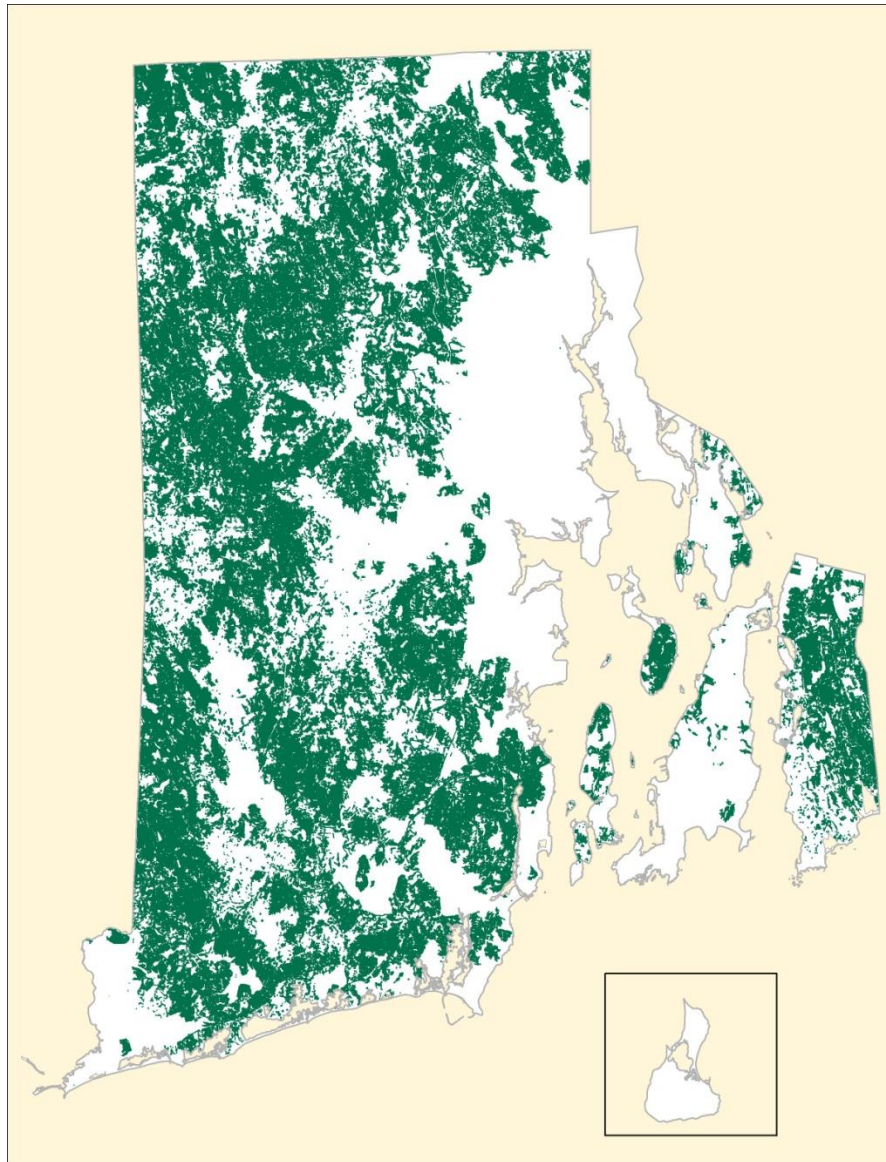
Deciduous Forests



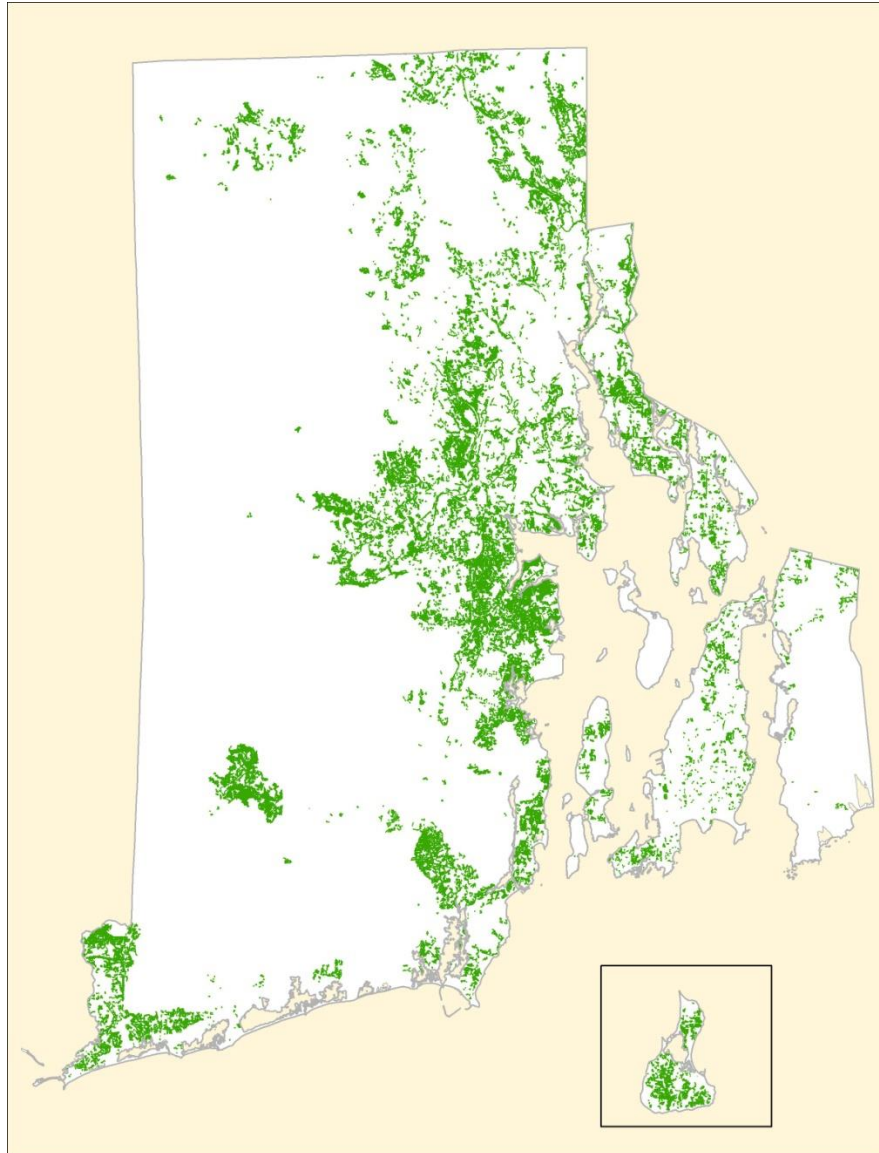
Coniferous Forests



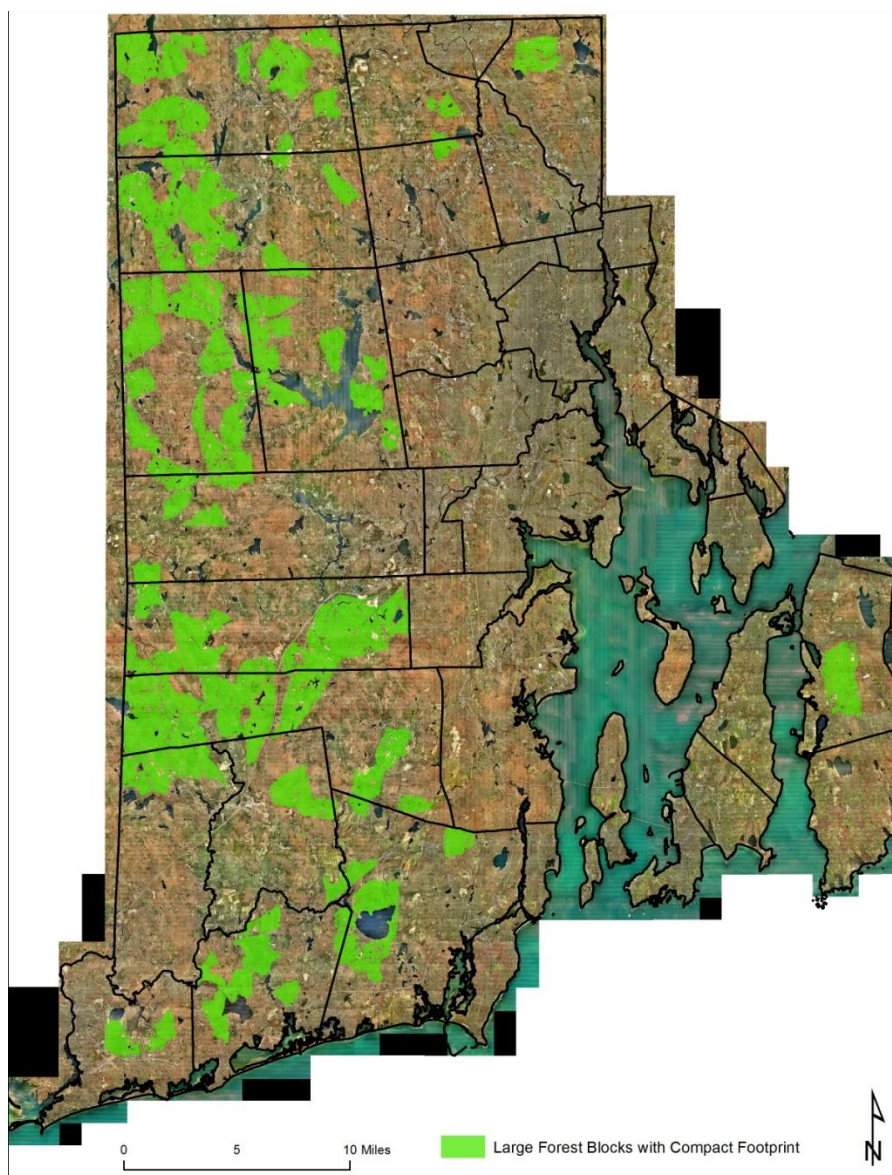
Mixed Coniferous/Deciduous Forests



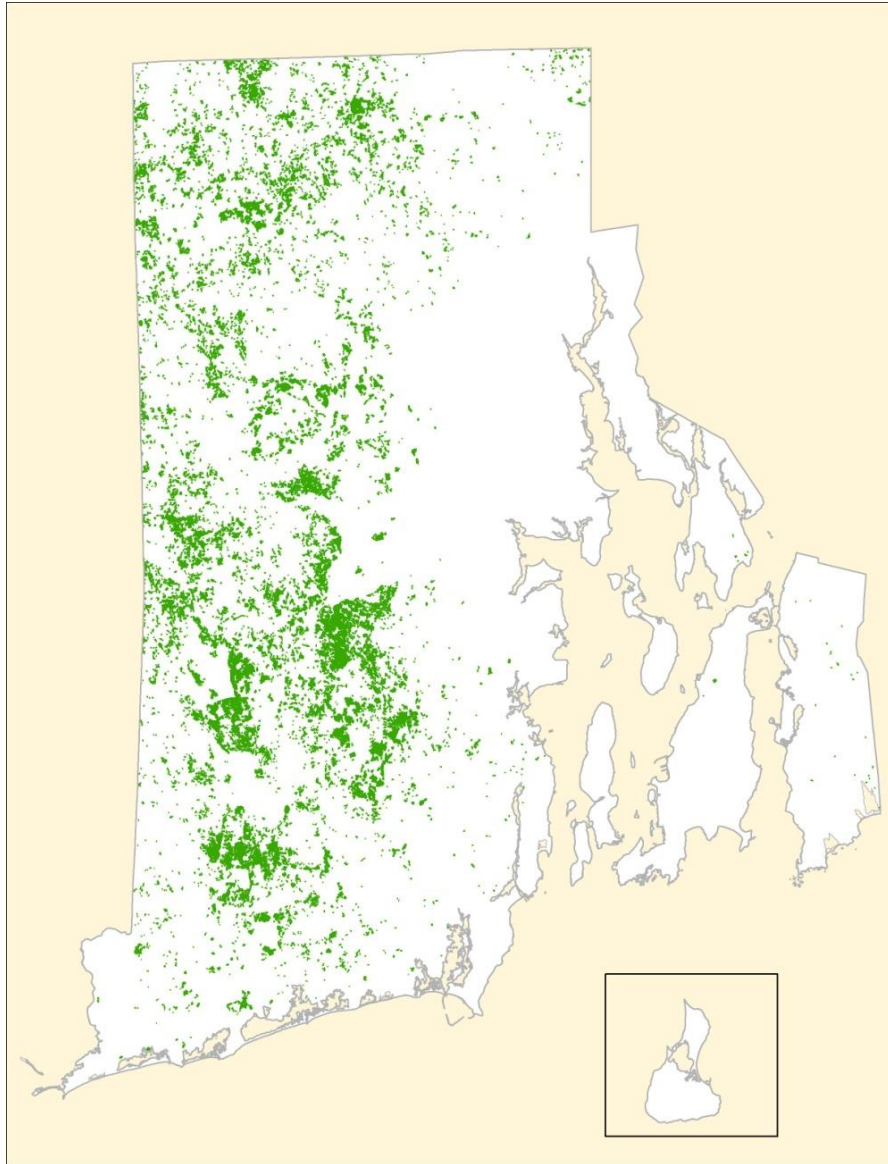
Oak Forests



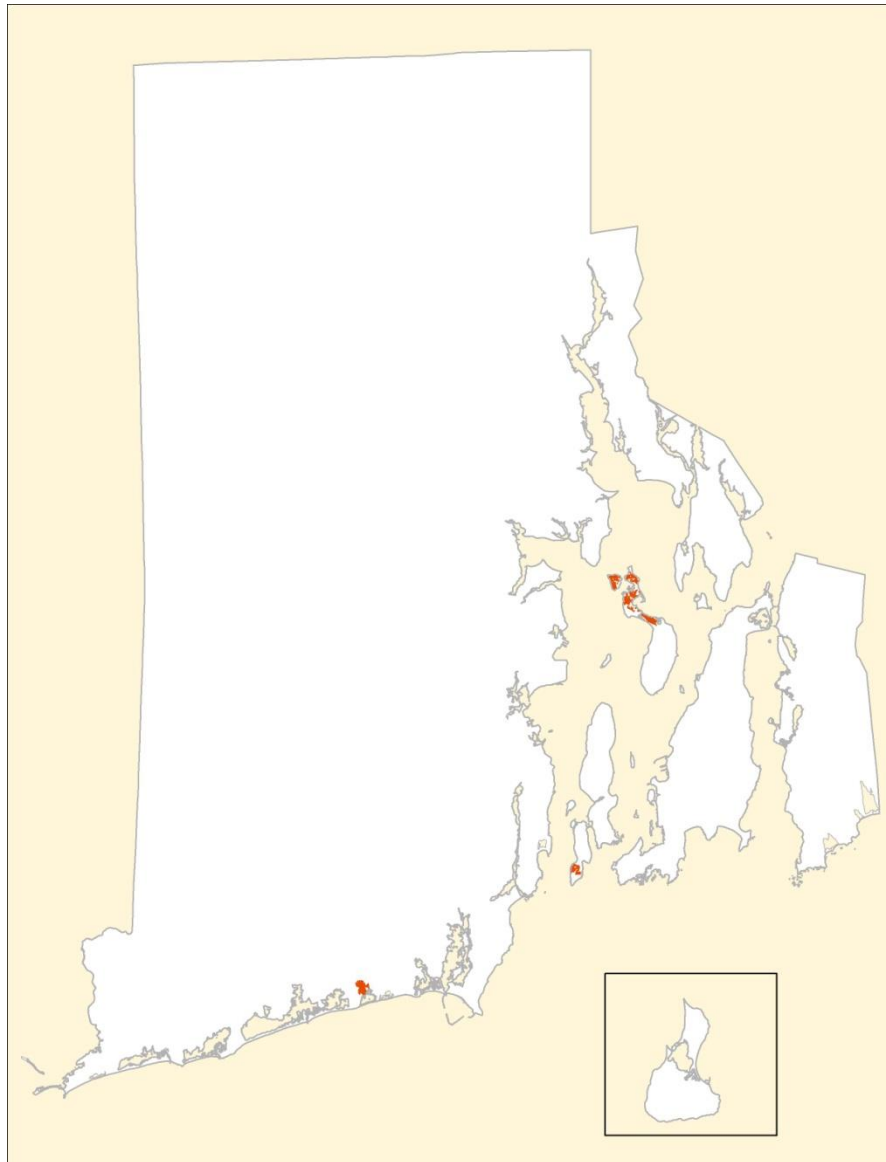
Ruderal Forests



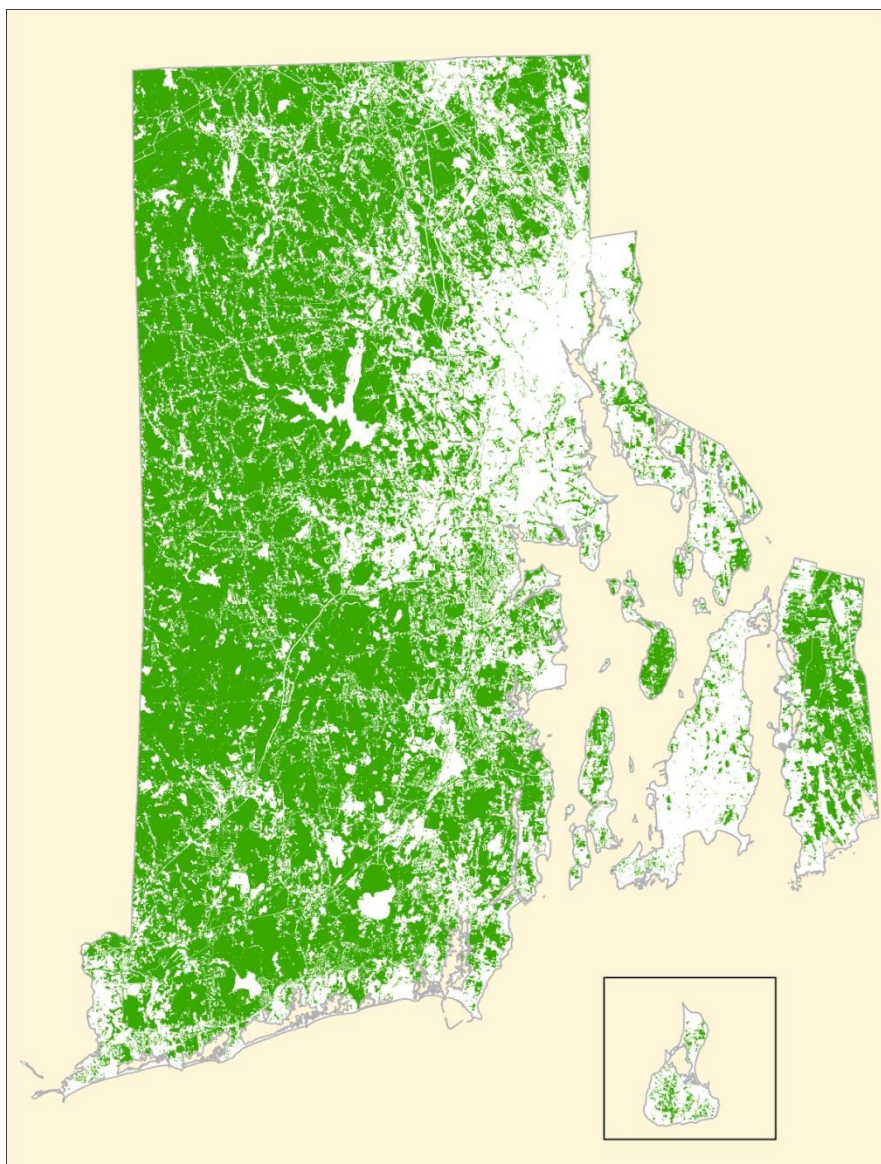
Large Forest Blocks



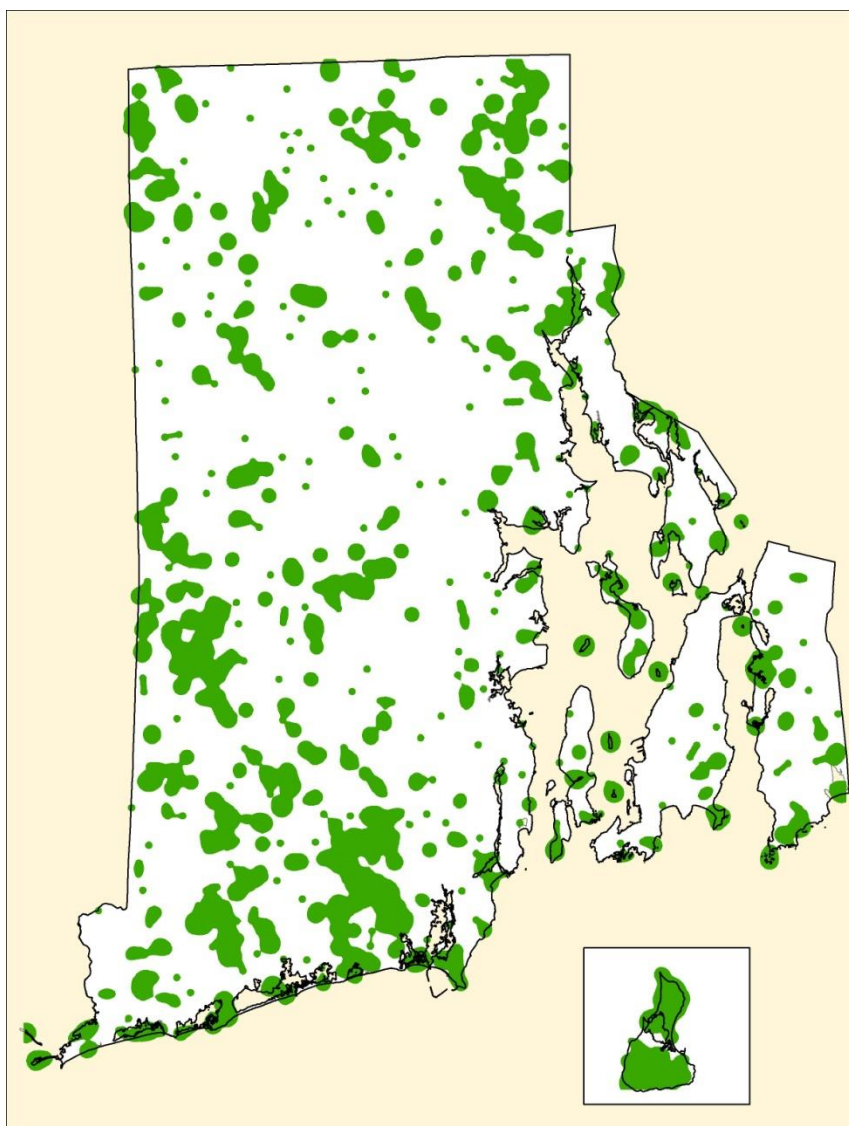
Tree Plantations



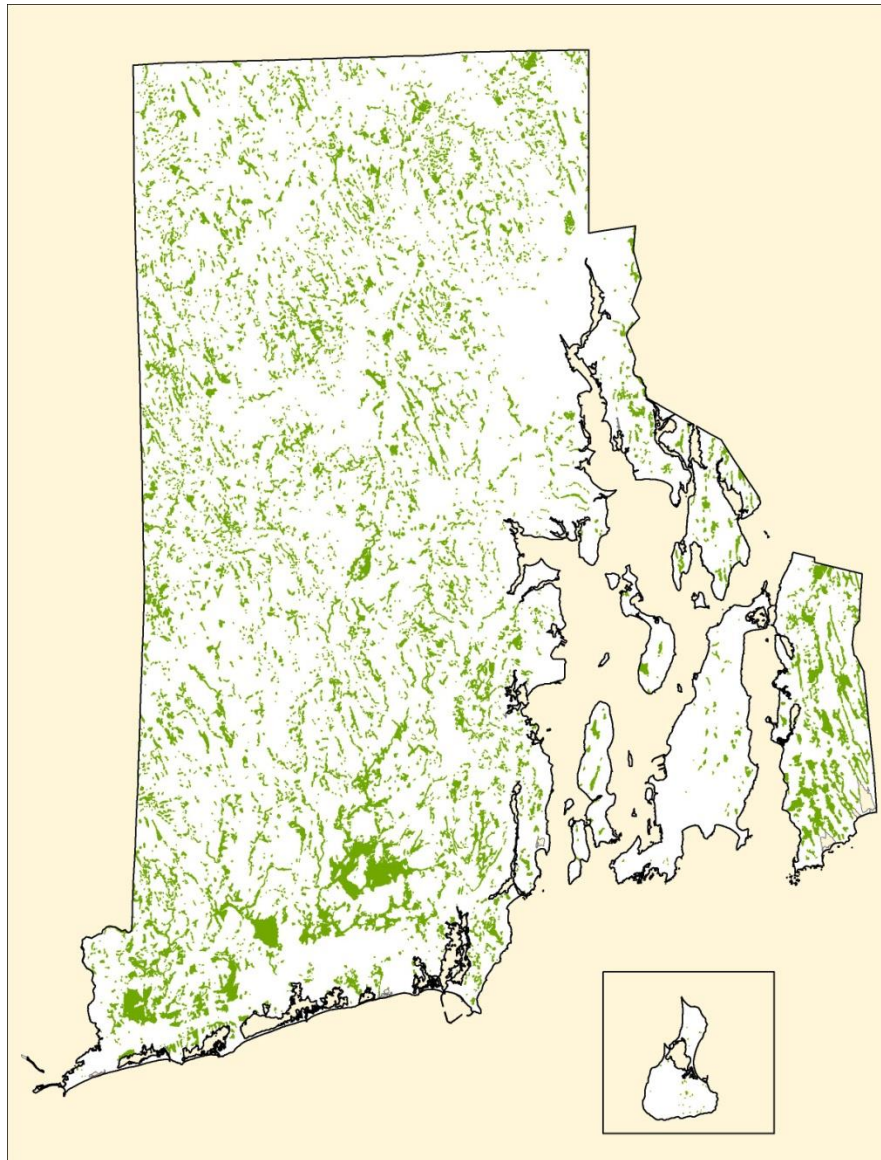
Maritime Woodlands



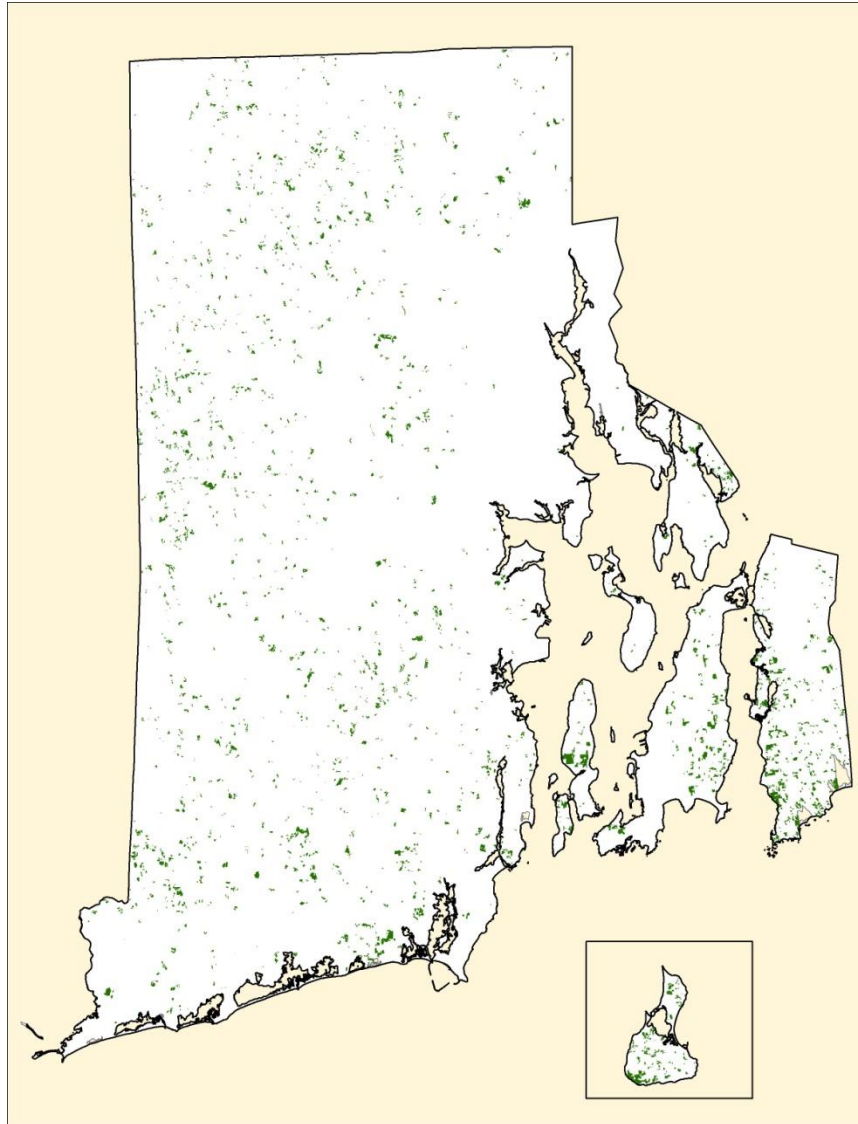
All Forest Types



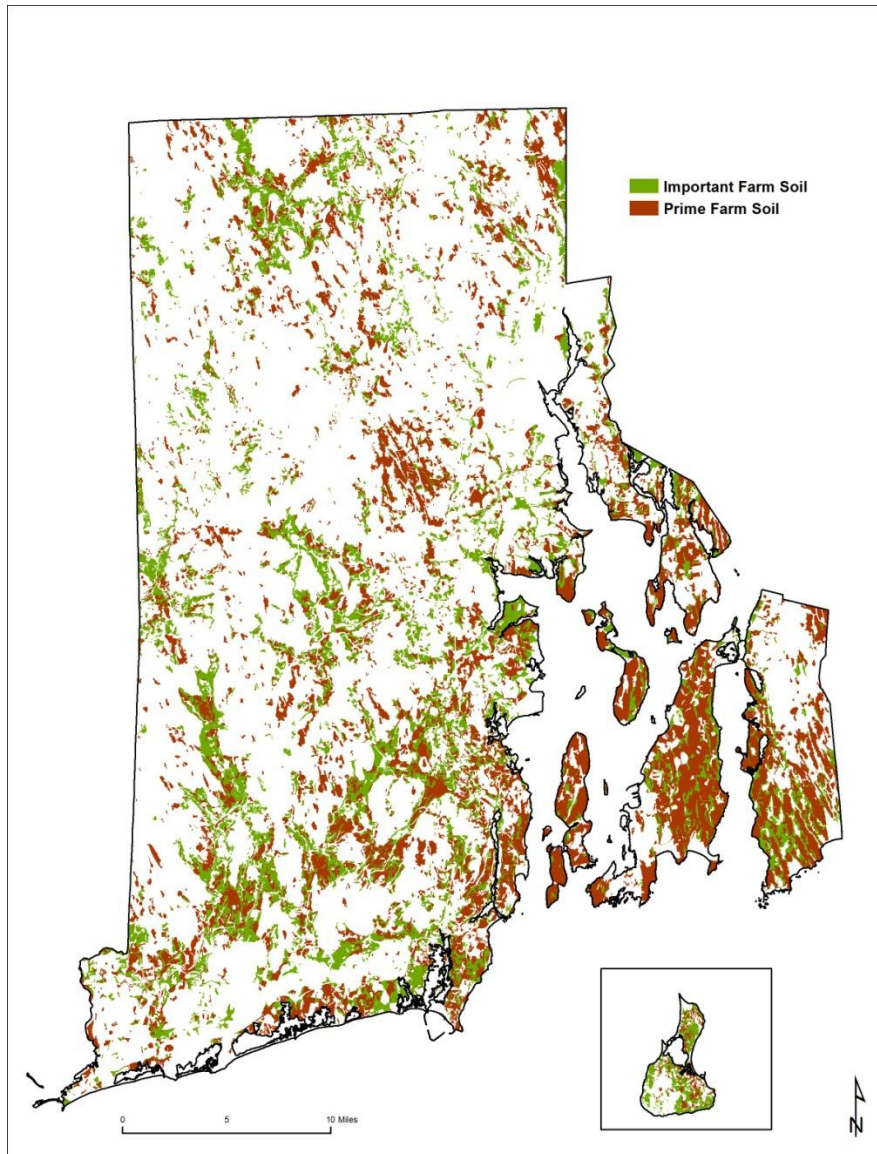
Heritage Density



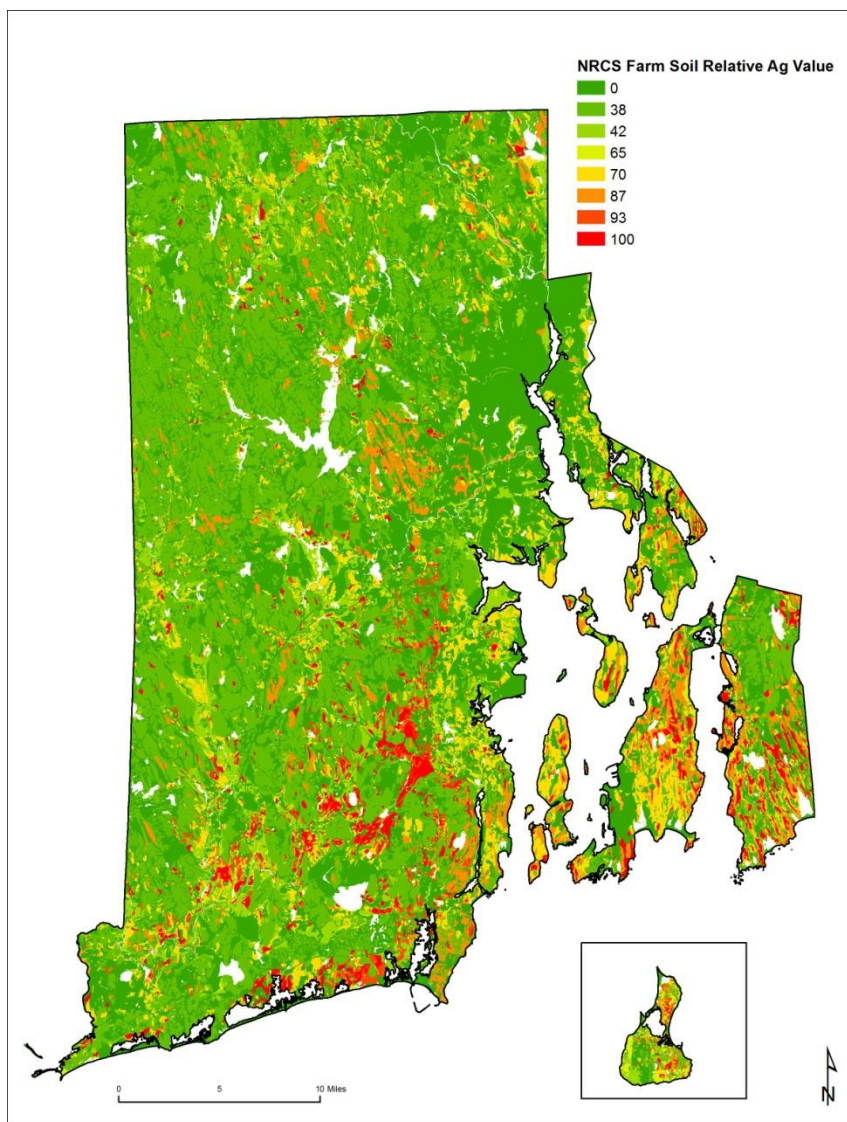
Forested Swamps



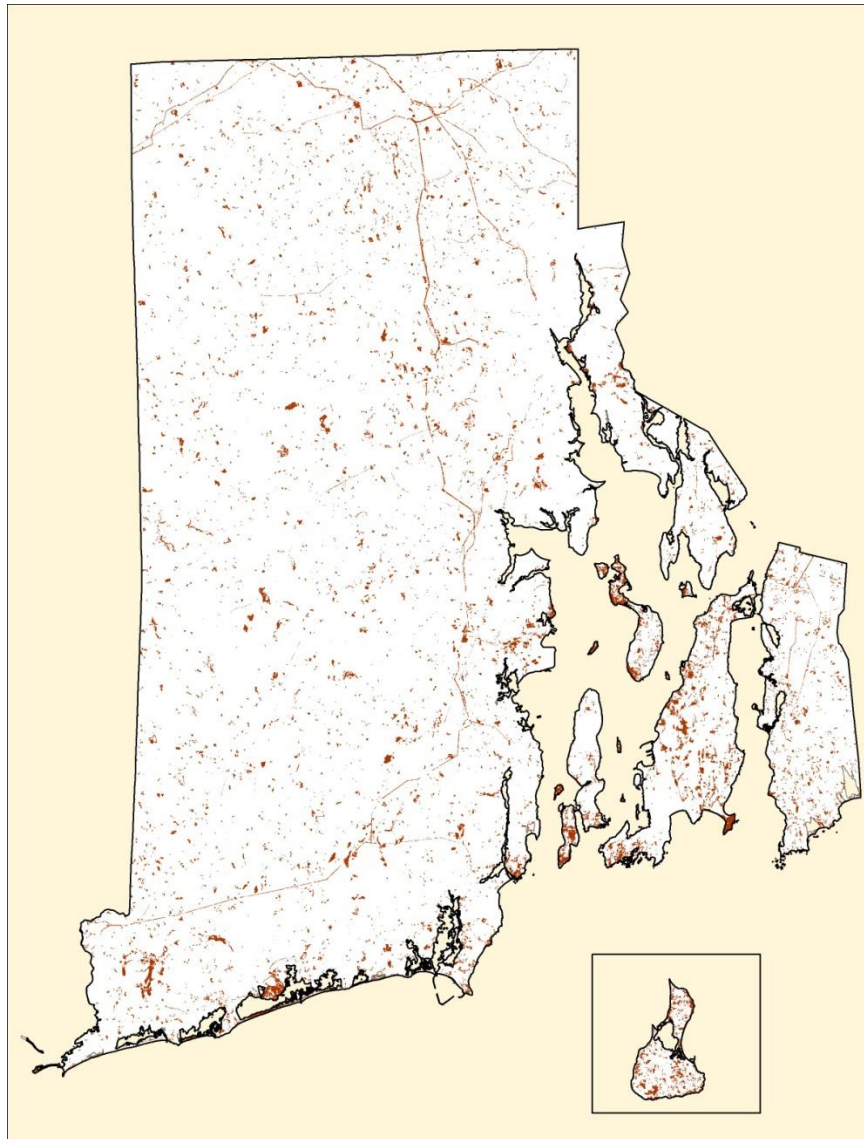
Agricultural Grasslands



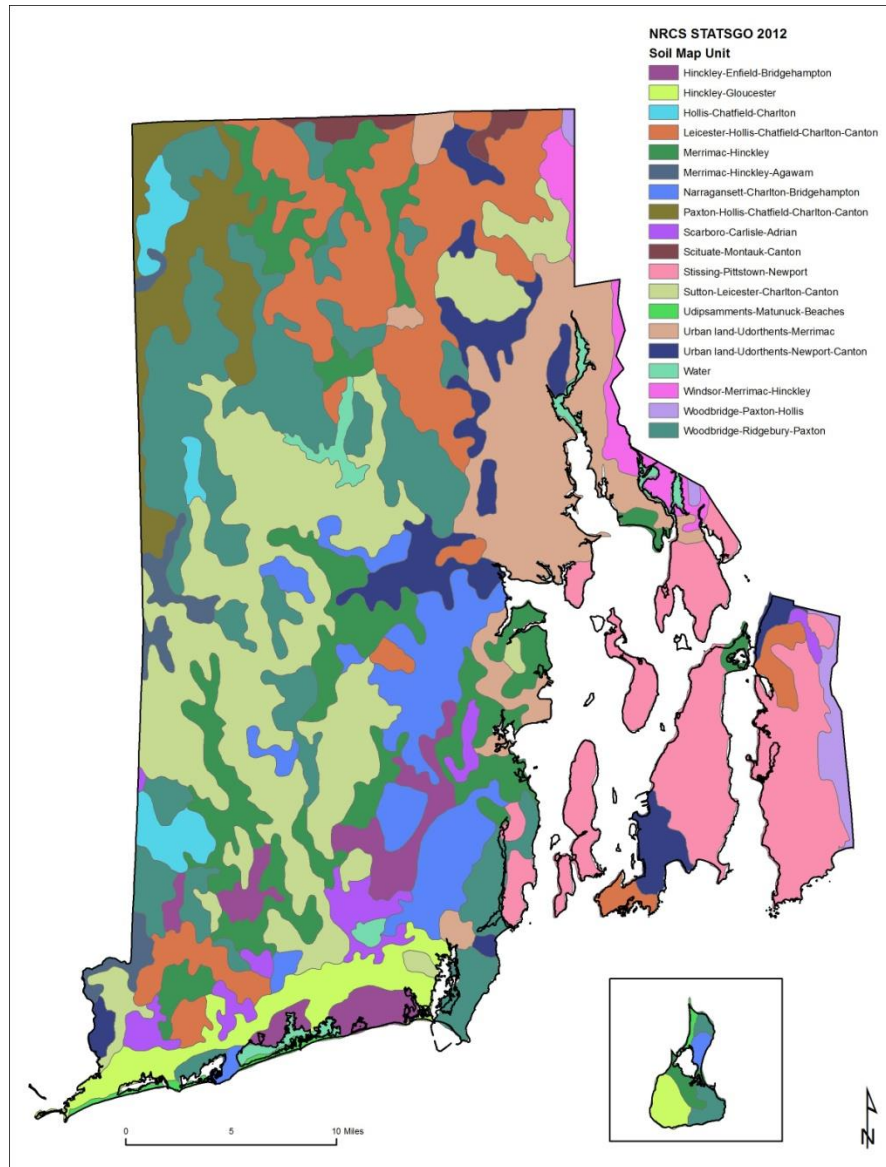
Prime or Important Farmland



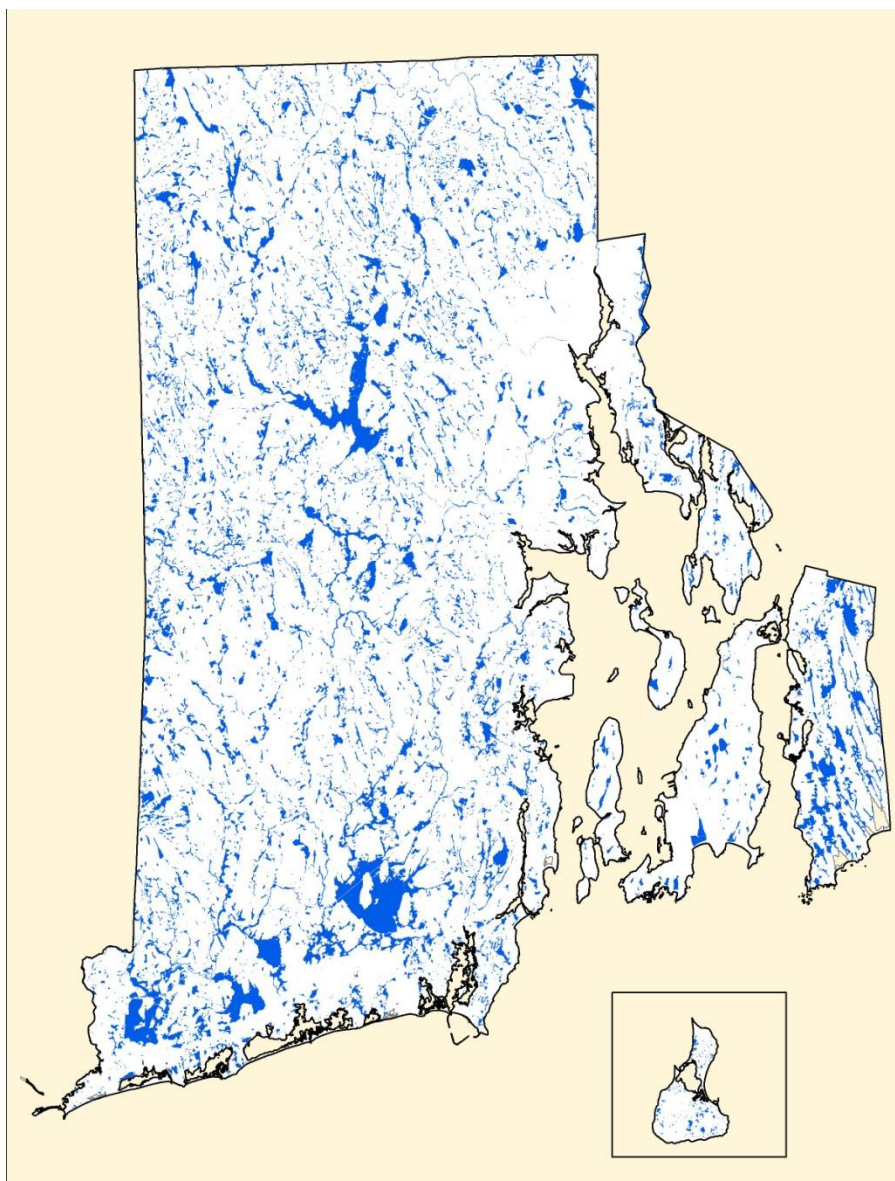
Relative Agricultural Value-Farm Bill



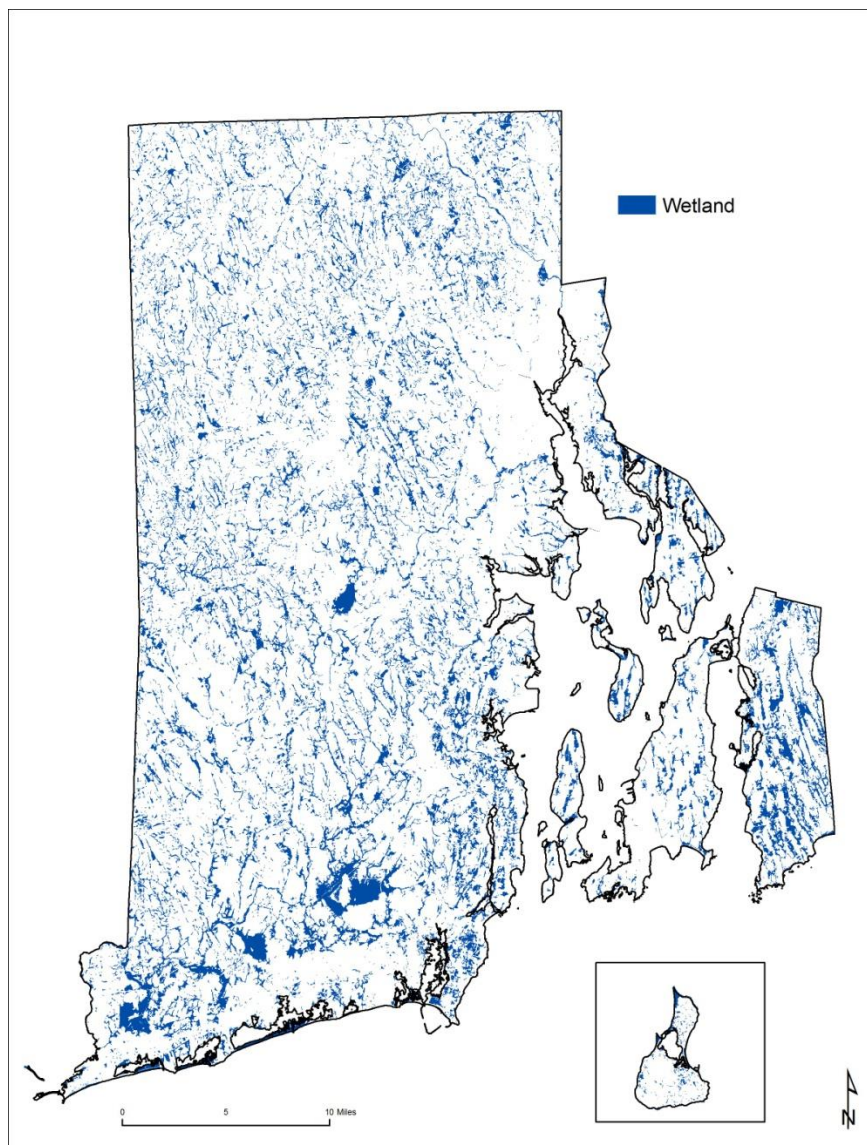
Shrubland Habitat



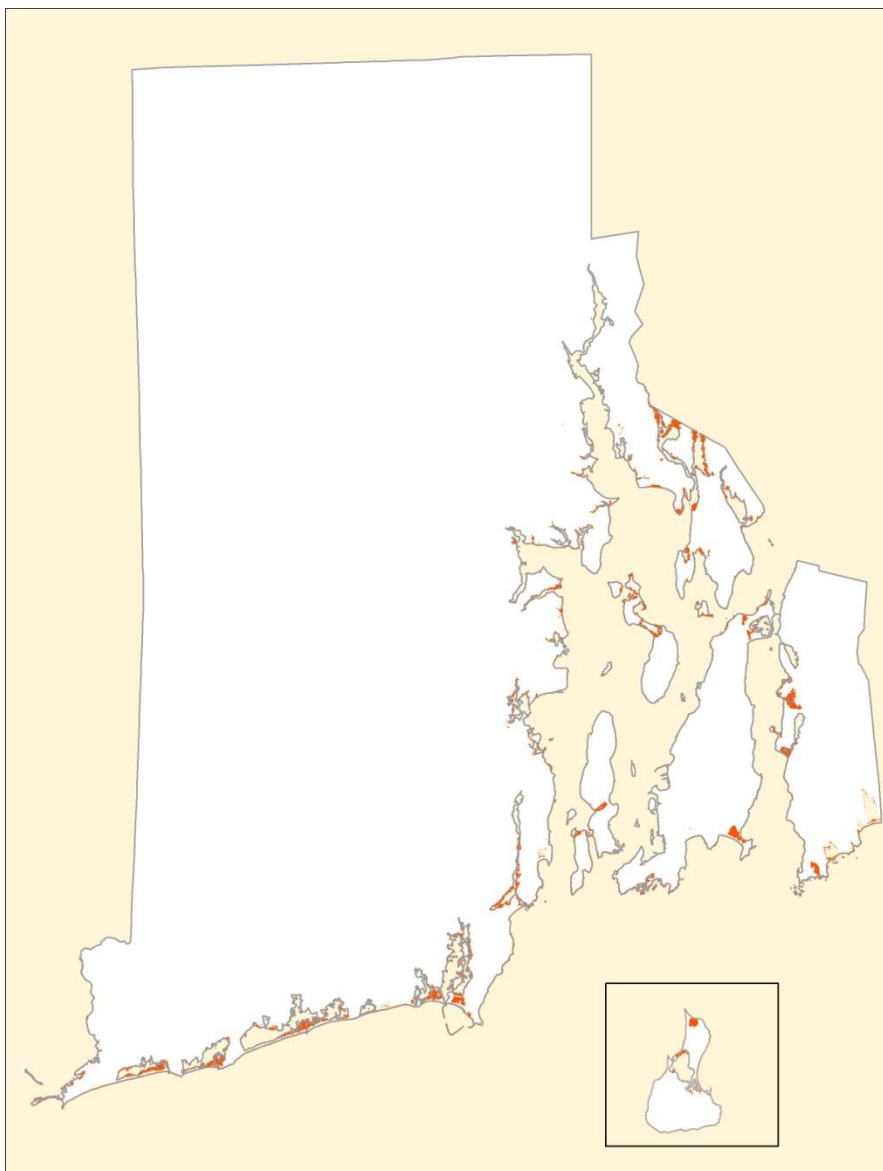
Soils Map of Rhode Island



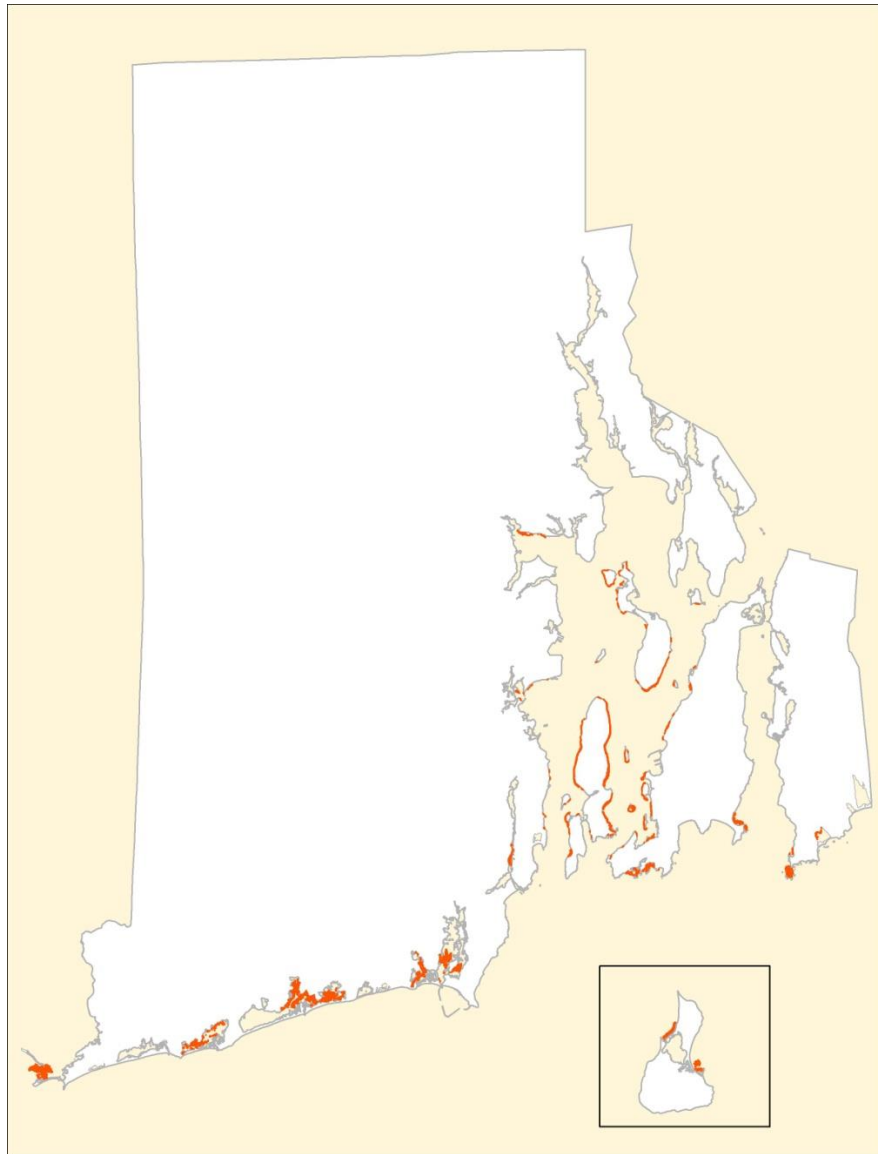
Freshwater Ponds and Wetlands



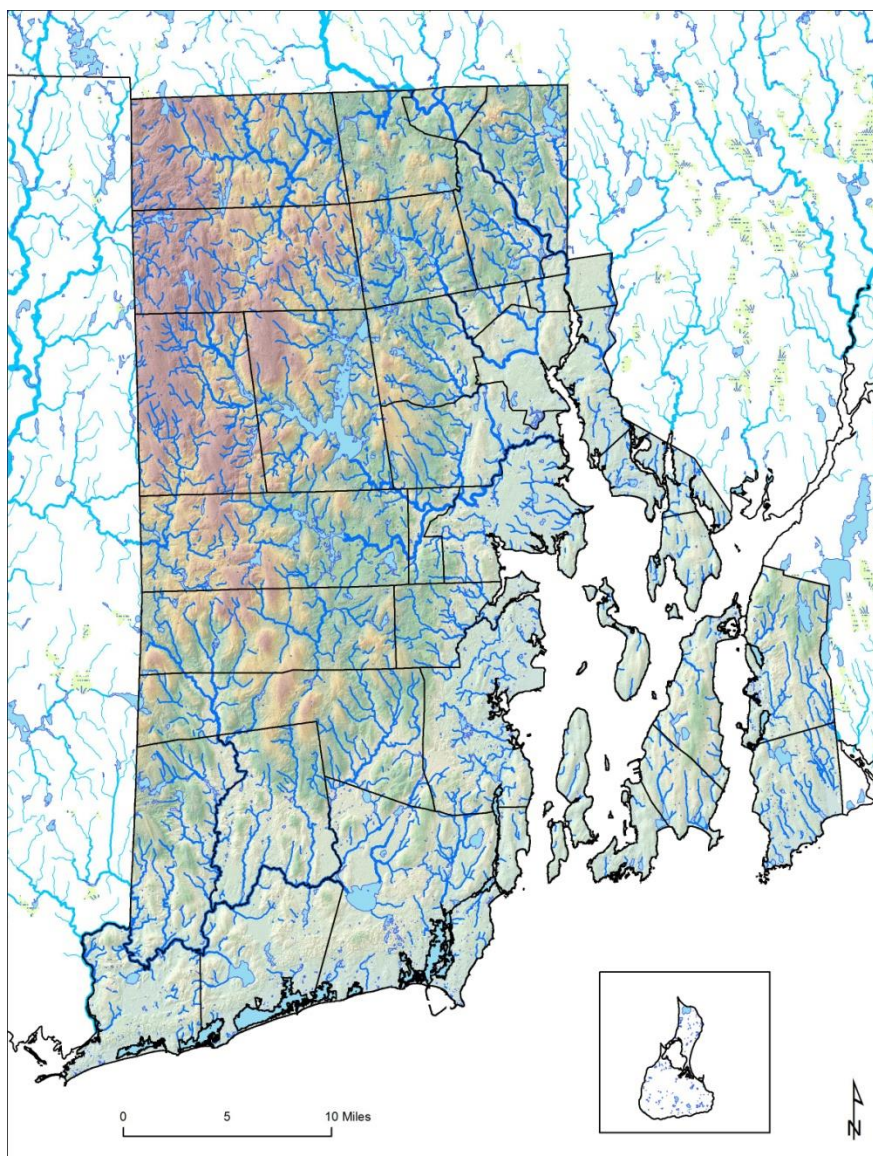
Wetlands



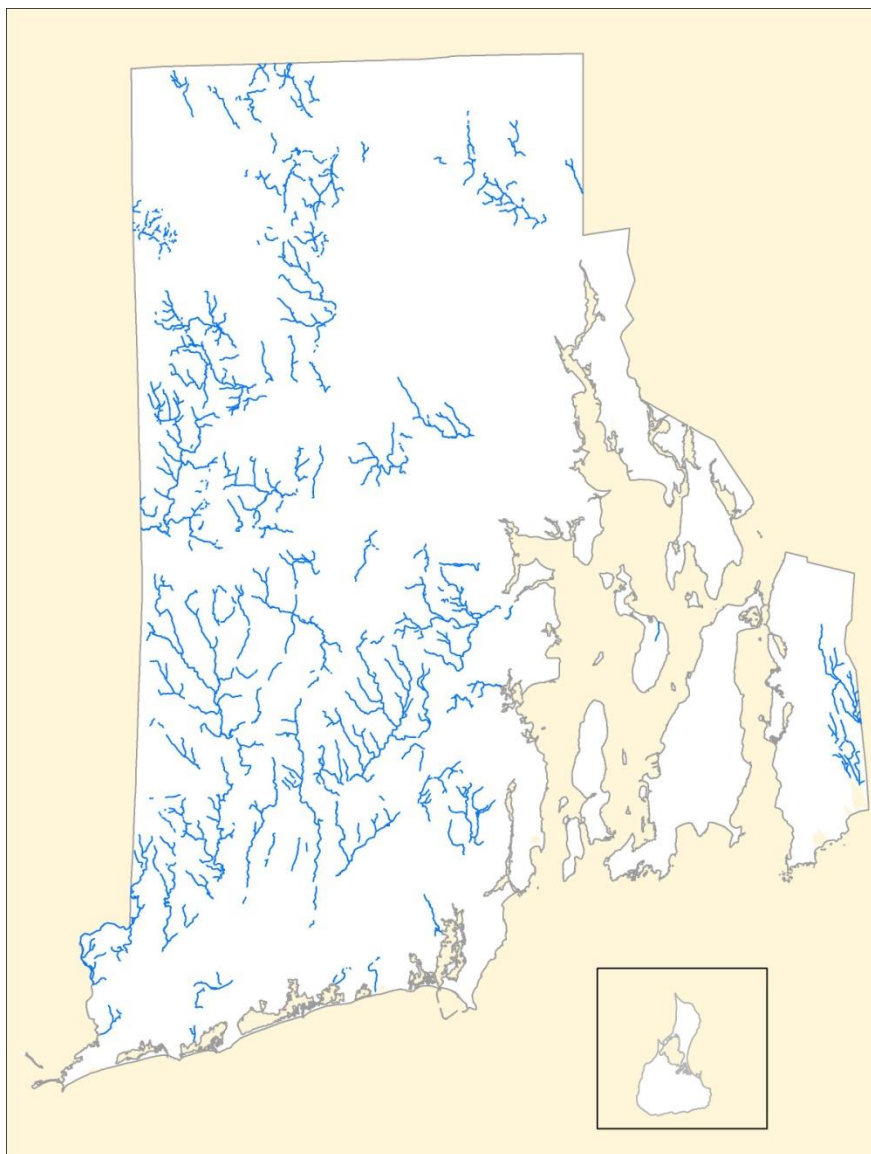
Estuarine Wetlands



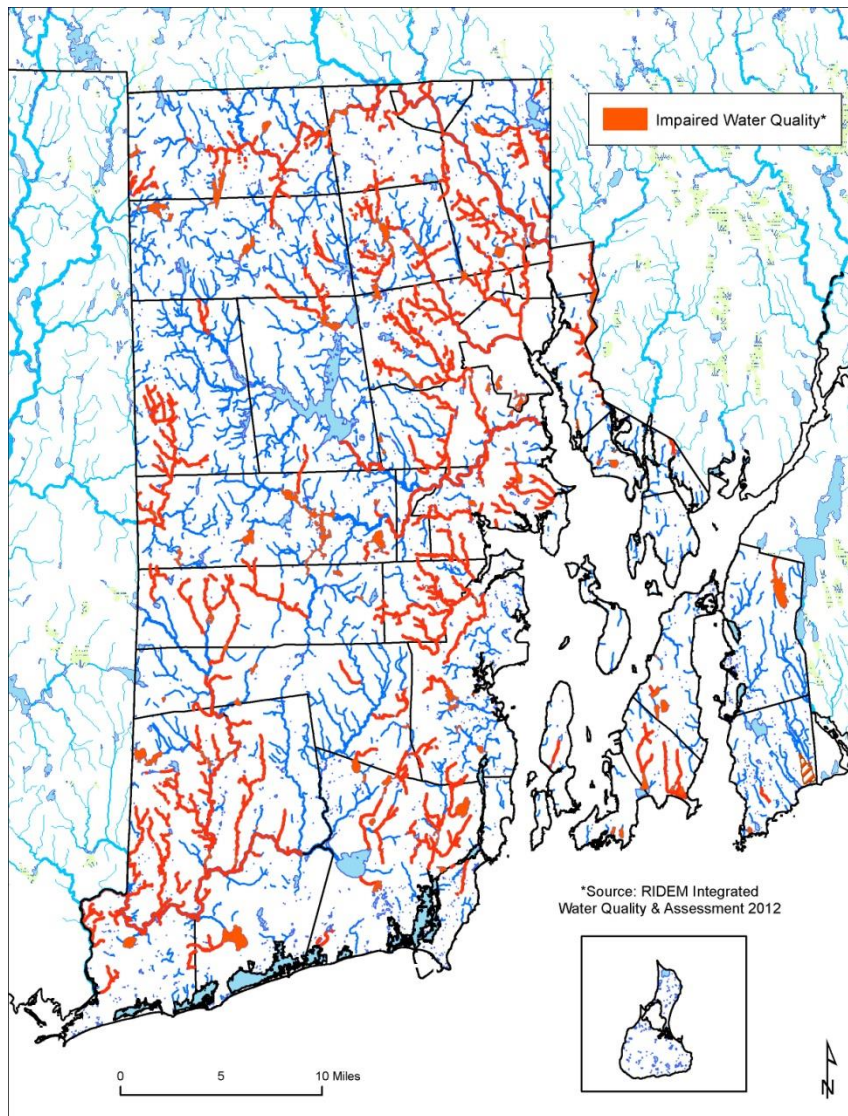
Eelgrass Beds



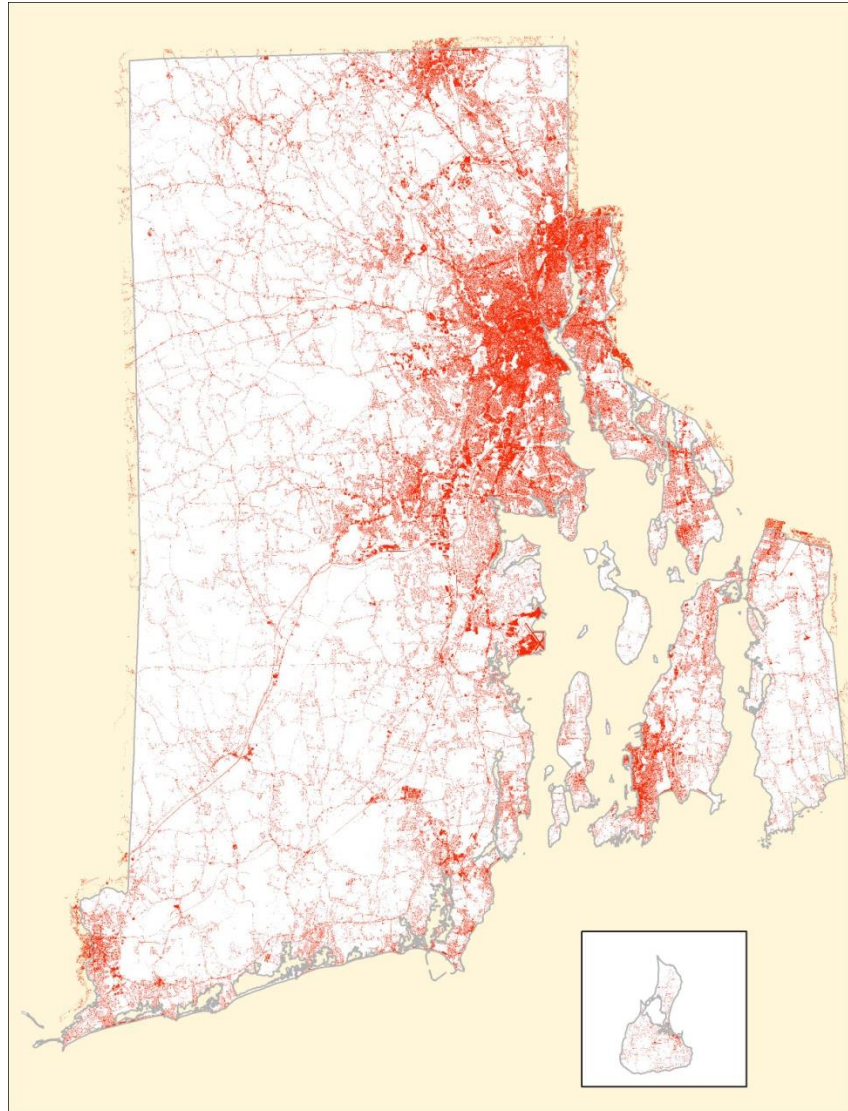
Surface Waters



Coldwater Streams

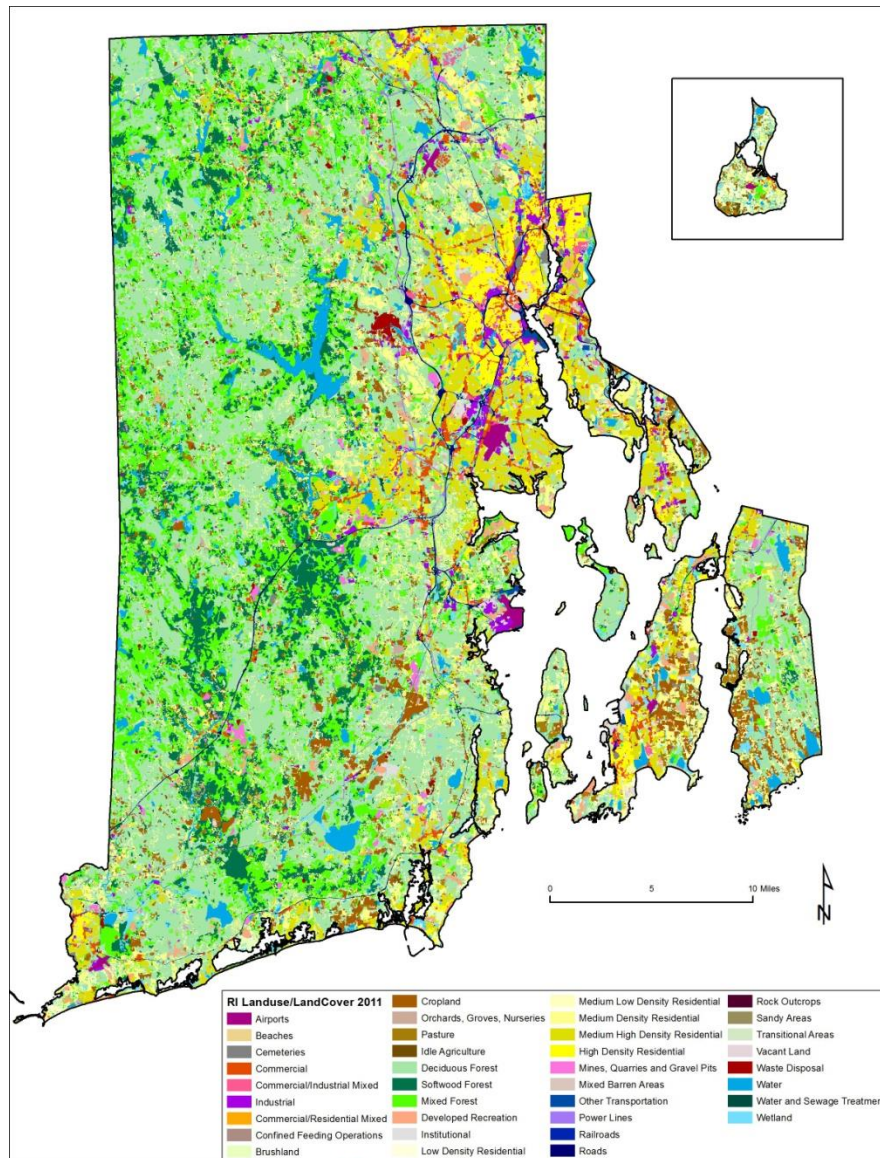


Impaired Waters of Rhode Island



Impervious Surfaces

APPENDIX 2b: MAPS OF KEY HABITATS IN RHODE ISLAND



Land Uses 2011